

REMARKS

Claims 23-38 and 40-52 are currently pending. Claims 23-29, 31-38 and 40-52 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,744,993 issued to Bisson (“Bisson”). Claim 30 was rejected under 35 U.S.C. §103(a) as being unpatentable over Bisson in view of U.S. Patent No. 3,989,853 issued to Forkner (“Forkner”). Claims 49-52 were rejected under 35 U.S.C. §112 as failing to comply with the written description requirement. Finally, claim 52 was rejected under 35 U.S.C. §112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention.

Claim 52 is canceled with traverse. Claims 53-60 were added. The Applicant respectfully traverses each of the rejections with respect to the remaining claims.

Independent Claim 23 and Dependent Claims 24-35 and 55

Bisson does not teach or suggest, among other things, “passing an expanded foodstuff composition, which is in a plastic state and is therefore capable of further expansion or contraction, at a first temperature and a first pressure into a setting region at a second temperature, said second temperature being lower than said first temperature; and cooling and setting said expanded foodstuff composition which is to be set in the setting region at a second pressure which is lower than said first pressure, whereby to produce a set expanded foodstuff.” Bisson does not teach or suggest expanding a foodstuff, and then passing the expanded foodstuff from a region at T_1 and P_1 to a setting region at T_2 and P_2 , where $T_1 > T_2$ and $P_1 > P_2$. Application, pages 2-3. In other words, the extrusion temperature of Bisson is not equivalent to the claimed first temperature. Claim 55 further clarifies this by reciting that the first temperature and first pressure are in a region outside and after an extruder.

In contrast, Bisson describes a process in which “the paste-like material issuing from the nozzle bores is passed into an enclosure where a sub-atmospheric pressure prevails. Under the effect of the decompression, part of the water present in this material ... is evaporated while its temperature suddenly falls which causes its puffing and the rigidification of the cellular structure produced.” Col. 3, lines 21-27. As the Bisson dough leaves the nozzle bore of the extruder, it is passed into a region having T_1' and P_1' . Unlike claim 23, the expanded dough is not subjected to a second region at T_2' and P_2' where $T_1' > T_2'$ and $P_1' > P_2'$. At best, the puffed Bisson product is

removed from the sub-atmospheric region to a region at atmospheric pressure, where $P_1' < P_2'$. Bisson, claim 1.

Nevertheless, the Examiner has suggested that Bisson's foodstuff is partially expanded in the extruder, and therefore, the temperature and pressure of the extruder in Bisson are comparable to T_1 and P_1 of claim 23. Accordingly, the Examiner argues, Bisson's foodstuff passes from the extruder at T_1' and P_1' to the sub-atmospheric region at T_2' and P_2' , where $T_1' > T_2'$ and $P_1' > P_2'$. Applicant respectfully disagrees.

First, as noted in the present application, one way to obtain initial expansion of the foodstuff is by extruding the foodstuff through a die having a relatively high pressure region into a region having a relatively low pressure. Application, page 4, paragraph 1. Similarly, Bisson notes that puffing of a paste-like material occurs when the material is passed through the nozzle bore of an extruder into a region having sub-atmospheric pressure. Bisson, col. 3, lines 21-23. Neither the applicant nor Bisson suggests that a foodstuff is "expanded" or "puffed" prior to exiting an extruder (see claim 55). Instead, they suggest that "expansion" or "puffing" occurs when the foodstuff exits the extruder under relatively high temperature and pressure into a region with a lower pressure. Applicant has added claim 55 to further clarify the distinction.

Second, the Examiner has compared the expansion of dry flakes when moistened with water to "expansion" (or "puffing") as used in the context of the present application and Bisson. However, absorption and expansion are not necessarily synonymous. A sponge can absorb water without expanding. Similarly, flakes do not so much expand as much as they soften when exposed to water. It is almost certain that when water is added to the low density flakes and they become more pliable, the bulk behaviour of the material will tend towards contraction, even if there is a slight "expansion" of individual flakes.

As noted by the applicant in the specification, expanded foodstuffs are "formed by adding gas directly into the foodstuff composition ... or by injecting gas under pressure and subsequently releasing the pressure (e.g. extrusion). Alternatively ... a chemical agent ... may be incorporated into the foodstuff composition, which agent results in the formation of gas in the foodstuff composition." Application, page 1, paragraph 2. Similarly, Bisson notes that puffing of the paste-like material occurs when the material exits the nozzle bore into a region of reduced pressure, which evaporates water within the foodstuff to cause puffing. Bisson, col. 3, lines 21-27. One skilled in the art would understand that "expanded" in this context refers to foodstuff

expanded or puffed through, for example, the action of gas within the foodstuff and not by a potentially slight “expansion” of flakes due to absorption of water.

Consequently, independent claim 23 and dependent claims 24-35 and 55 are allowable. Allowance of these claims is respectfully requested.

Independent Claim 36 and Dependent Claims 37-38, 40-47 and 56

As discussed above, Bisson does not teach or suggest, among other things, “passing a foodstuff composition which is in at least a partially expanded condition and in a plastic state and is therefore capable of further expansion or contraction and which contains a vaporisable expanding agent, at a first temperature and a first pressure into a setting region at a second temperature, said second temperature being lower than said first temperature; and cooling and setting said foodstuff composition which is to be set in the setting region at a second pressure which is lower than said first pressure so as to further expand the foodstuff composition by evaporation of the vaporisable expanding agent and produce a set expanded foodstuff.” Bisson does not teach or suggest expanding a foodstuff, and then passing the expanded foodstuff from a region at T_1 and P_1 to a setting region at T_2 and P_2 , where $T_1 > T_2$ and $P_1 > P_2$. Application, pages 2-3. In other words, the extrusion temperature of Bisson is not equivalent to the claimed first temperature. Claim 56 further clarifies this by reciting that the first temperature and first pressure are in a region outside and after an extruder.

Consequently, independent claim 36 and dependent claims 37-38, 40-47 and 56 are allowable. Allowance of these claims is respectfully requested.

Independent Claim 48 and Dependent Claim 57

Bisson does not teach or suggest “passing a foodstuff composition which is in at least a partially expanded condition and in a plastic state and is therefore capable of further expansion or contraction and which contains a vaporisable expanding agent, at a first temperature and substantially atmospheric pressure into a setting region at a second temperature, said second temperature being lower than said first temperature; and cooling and setting said foodstuff composition which is to be set in the setting region at a pressure which is lower than atmospheric pressure so as to further expand the foodstuff composition by evaporation of the vaporisable expanding agent and produce a set expanded foodstuff.” Bisson does not teach or suggest

expanding a foodstuff, and then passing the expanded foodstuff from a region at T_1 and P_1 to a setting region at T_2 and P_2 , where $T_1 > T_2$ and $P_1 > P_2$. Application, pages 2-3. In other words, the extrusion temperature of Bisson is not equivalent to the claimed first temperature. Claim 57 further clarifies this by reciting that wherein the first temperature and first pressure are in a region outside and after an extruder.

Consequently, independent claim 48 and dependent claim 57 are allowable. Allowance of these claims is respectfully requested.

Dependent Claims 49-51 and 58-60

Dependent claims 49, 50 and 51 depend from allowable claims 23, 36 and 48, respectively, and contain additional patentable subject matter. Particularly, dependent claims 49-51 specify that the first temperature is greater than 100 to 150° C.

The Examiner suggests that a temperature range from 100 to 150° C is not supported by the examples. In particular, the Examiner recites that Example 1 sets forth that the temperature in the extruder ranges from 30-40° C, 60-65° C and 140-150° C. However, the first temperature refers to the temperature of the foodstuff after initial expansion. If an extruder is used to facilitate initial expansion, then the first temperature is that temperature outside the extruder, not within it. The first temperature in Example 1 is 120° C. Application, bottom of page 6. Similarly, the first temperature in Example 2 is 105° C. Application, page 8, paragraph 1. The first temperatures of both Example 1 and Example 2 fall within the 100 to 150° C range cited in claims 49-51.

Again, Bisson's extrusion temperature, which has an upper limit of 100° C, is not the same as applicant's claimed first temperature. Moreover, Bisson does not teach, suggest or even mention temperatures greater than 100° C anywhere in the process. Accordingly, claims 49-51 contain additional patentable subject matter. Furthermore, claims 58-60, which each depend on an allowable independent claim, further specify a first temperature of 105° C to 150 and are therefore allowable.

Accordingly, and for other reasons not discussed herein, the Applicant respectfully requests withdrawal of the U.S.C. §112 rejection of claims 49-51.

Consequently, claims 49-51 and 58-60 are allowable. Allowance of these claims is respectfully requested.

Dependent Claims 53-54

New dependent claim 53 depends from allowable claim 23, and contains additional patentable subject matter. Particularly, dependent claim 53 specifies that the foodstuff is initially expanded by at least one of heat and pressure.

During the telephonic interview, the Examiner suggested that the Applicant consider including in the claim language that the expanded foodstuff exists subsequent to extrusion. The Applicant maintains that, in view of the above discussion, the current claims are distinguishable over Bisson without amendment. However, the Applicant has added claim 53 to specify a foodstuff initially expanded by heat and/or pressure so that the claimed first temperature clearly pertains to an expanded foodstuff. In contrast, Bisson's paste-like material is not puffed until after extrusion. Therefore, the extrusion temperature of Bisson is not equivalent to the first temperature cited in claim 23 of the present invention.

New dependent claim 54 depends from claim 53, and contains additional patentable subject matter specifying that the foodstuff is initially expanded by extruding the foodstuff through a die at an elevated pressure into a region having a lower pressure.

Accordingly, the Applicant respectfully requests consideration and allowance of dependent claims 53-54.

CONCLUSION

In view of the foregoing, allowance of the application is respectfully requested. Should any issues remain, the Examiner is encouraged to contact the undersigned at the number listed below.

Respectfully submitted,



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